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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/023,330

12/20/2001

Isabelle Rollat

05725.0922-00

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04/29/2010

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EXAMINER

YU, GINA C

ART UNIT

PAPER NUMBER

1611

MAIL DATE

DELIVERY MODE

04/29/2010

PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ISABELLE ROLLAT, HENRI SAMAIN,
BEATRICE PERRON and SERGE RESTLE

Appeal 2009-010551¹
Application 10/023,330
Technology Center 1600

Decided: April 29, 2010

Before CAROL A. SPIEGEL, DONALD E. ADAMS and
LORA M. GREEN, *Administrative Patent Judges*.

ADAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal under 35 U.S.C. § 134 involves claims 167, 168, 171, 172, 174, 175, 177, 178, 180, 181, 185-191, 193-203, 205-208, 210-216, 218-228, 230-240, 242-245, 247-253, 255-258, 260-266, 268-278, 280-290, 292-302, 304-307, and 309-311. We have jurisdiction under 35 U.S.C. § 6(b).

¹ Oral Hearing held April 21, 2010.

STATEMENT OF THE CASE

The claims are directed to a reshapable hair styling composition.

Claim 167 is illustrative:

167. A reshapable hair styling composition comprising:

(1) at least one (meth)acrylic copolymer present in an amount ranging from about 0.01 to about 15 weight percent of the total weight of the composition, wherein said at least one (meth)acrylic copolymer comprises:

(a) from about 10 to about 90 weight percent of units derived from at least one monomer chosen from n-butyl acrylate monomers,

(b) from about 2 to about 50 weight percent of units derived from at least one monomer chosen from 2-hydroxy ethyl (meth)acrylate monomers, and

(c) up to about 80 weight percent of units derived from at least one monomer chosen from 2-ethyl hexyl acrylate monomers, and

(2) at least one surfactant present in an amount ranging from about 5 to about 30 weight percent of the total weight of the composition,

wherein said composition provides a reshapable effect and is a shampoo.

The Examiner relies on the following evidence:

Torgerson	US 5,019,377	May 28, 1991
Yang et al.	US 6,013,722	Jan. 11, 2000

The rejection presented by the Examiner follows:

Claims 167, 168, 171, 172, 174, 175, 177, 178, 180, 181, 185-191, 193-203, 205-208, 210-216, 218-228, 230-240, 242-245, 247-253, 255-258, 260-266, 268-278, 280-290, 292-302, 304-307, and 309-311 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Torgerson and Yang.

We reverse.

ISSUE

Did the Examiner err in concluding that it would have been prima facie obvious to a person of ordinary skill in the art at the time Appellants' invention was made to modify Torgerson's composition by substituting Yang's adhesive copolymer comprising n-butyl acrylate/2-hydroxy ethyl (meth)acrylate/2-ethyl hexyl acrylate monomers for Torgerson's adhesive copolymer?

FINDINGS OF FACT

FF 1. An object of Torgerson's "invention is to provide low glass transition temperature adhesive copolymers useful for providing temporary set style hold to hair" for use "in hair-care products to provide hair styling hold, e.g., hair sprays, mousses, shampoos, and conditioners" (Torgerson, col. 2, ll. 27-29 and col. 1, ll. 13-15; *see also* Ans. 3).

FF 2. The low glass transition temperature adhesive copolymers of Torgerson's invention have "the general structure: $(H_x)_m-(L_y)_n \dots$ with at least one H monomer component being selected from acrylate amides or methacrylate amides [and] \dots at least one L monomer component being selected from acrylate ester or methacrylate esters" (Torgerson, col. 3, ll. 22-34; Ans. 4).

FF 3. Torgerson's preferred acrylate esters and methacrylate esters "include butylacrylate, n-butylmethacrylate, 2-ethylhexylacrylate, or the mixture thereof" (Ans. 4; *see also* Torgerson, col. 4, ll. 33-38).

FF 4. Torgerson teaches that

Since the copolymers of the present invention have two or more component monomers, one or more of the component

monomers will be such that it forms a homopolymer having a glass transition temperature above the temperature desired for the copolymer to be synthesized (i.e., the H monomer components); and one or more of the other component monomers will be such that it forms a homopolymer having a glass transition temperature below the desired glass transition temperature (i.e., the L monomer components). Combining these monomer components randomly in various weight ratios gives copolymers which have single glass transition temperatures between the higher and lower glass transition temperatures for the homopolymers of the monomers utilized.

(Torgerson, col. 3, l. 61 - col. 4, l. 8.)

FF 5. The Examiner finds that Torgerson fails to teach Appellants' (meth)acrylic copolymer, which comprises at least one monomer chosen from n-butyl acrylate monomers, at least one monomer chosen from 2-hydroxy ethyl (meth)acrylate monomers, and at least one monomer chosen from 2-ethyl hexyl acrylate monomers (*id.*; Claim, 167).

FF 6. Yang teaches acrylic emulsion pressure sensitive adhesive compositions for use in decorative, light management or optical articles (Yang, Abstract).

FF 7. Yang's "water-resistant emulsion pressure sensitive adhesive" comprises "(a) 50-90% by weight . . . n-butyl acrylate, (b) 10-50% . . . by weight 2-hydroxy ethyl acrylate, or 2-hydroxy ethyl methacrylate, hydroxy propyl acrylate monomer, or mixtures thereof, (c) optionally, co-polymerizable monomers and (d) optionally, a multifunctional cross-linking agent" (Yang, col. 3, ll. 13-20; *see also* Ans. 4-5).

FF 8. Yang teaches that "[t]he optional co-polymerizable monomers include (i) 0-50% by weight alkylacrylate monomer or (ii) 0-5% by weight polar monomers or (iii) 0-50% by weight ethylenically unsaturated free

radically polymerizable monomers. Alkylacrylate monomers may include[, *inter alia*,] 2-ethyl hexyl acrylate” (Yang, col. 3, ll. 25-31).

PRINCIPLES OF LAW

An invention “composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. . . . [I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

ANALYSIS

Appellants’ claimed composition comprises, *inter alia*, at least one (meth)acrylic copolymer that comprises:

- (a) at least one monomer chosen from n-butyl acrylate monomers,
- (b) at least one monomer chosen from 2-hydroxy ethyl (meth)acrylate monomers, and
- (c) at least one monomer chosen from 2-ethyl hexyl acrylate monomers,

An object of Torgerson’s “invention is to provide low glass transition temperature adhesive copolymers useful for providing temporary set style hold to hair” (FF 1). The low glass transition temperature adhesive copolymers of Torgerson’s invention have “the general structure: $(H_x)_m-(L_y)_n$ ”, wherein at least one H monomer component is selected from acrylate amides or methacrylate amides and at least one L component is preferably

selected from a group which includes “*butylacrylate*, n-butylmethacrylate, 2-ethylhexylacrylate, or the mixture thereof” (FF 2-3 (emphasis added)).

Torgerson teaches that the H and L monomeric components will have glass transition temperatures above and below the desired glass transition temperature and by randomly combining the H and L monomeric components in various weight ratios copolymers which have single glass transition temperatures between the higher and lower glass transition temperatures for the homopolymers of the monomers utilized will be obtained (FF 4).

Torgerson does not teach an adhesive copolymer that comprises n-butyl acrylate monomers, 2-ethyl hexyl acrylate monomers *and* at least one monomer chosen from 2-hydroxy ethyl (meth)acrylate monomers as required by Appellants’ claimed invention (FF 5).

The Examiner relies on Yang to teach a water-resistant emulsion pressure sensitive adhesive that comprises, *inter alia*, (a) *n-butyl acrylate*, (b) 2-hydroxy ethyl acrylate, or 2-hydroxy ethyl methacrylate, hydroxyl propyl acrylate monomer, or mixtures thereof, and (c) optionally, copolymerizable monomers, which may include 2-ethyl hexyl acrylate (FF 7-8).

Based on the combined teachings of Torgerson and Yang the Examiner concludes that it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to modify Torgerson’s composition “by substituting [Torgerson’s] adhesive polymer with . . . [Yang’s] adhesive copolymer comprising n-butyl acrylate/2-hydroxy ethyl (meth)acrylate/2-ethyl hexyl acrylate monomers” (Ans. 5). We are not persuaded.

Appellants contend that Torgerson “teaches the use in hair styling hold compositions of low glass transition temperature adhesive copolymers of the general chemical structure $(H_x)_m-(L_y)_n$ with at least one H monomer being selected from acrylate amides or methacrylate amides” (Reply Br. 3; FF 4). Appellants contend that Yang fails to teach acrylate amide or methacrylate amide monomers (Reply Br. 3). Therefore, Appellants contend that

To make the substitution proposed by the Examiner, i.e., substituting the copolymer of *Yang*, which is not formed from any (meth)acrylate amide monomers, for the polymer of *Torgerson*, which requires the presence of (meth)acrylate amide monomers in its structure, goes against the explicit teachings of *Torgerson*. As such, one of ordinary skill in the art would not have been lead to make the substitution proposed by the Examiner.

(Reply Br. 3-4.) We agree.

We are not persuaded by the Examiner’s contention “that the expectation of success does not hinge on the use of amide monomer because Yang already teaches the set of monomers which makes effective adhesive copolymers” (Ans. 7). The Examiner appears to have lost sight of the fact that one objective of Torgerson’s invention is to provide low glass transition temperature adhesive copolymers (FF 1). Torgerson achieves this objective by utilizing a copolymer composed of at least one acrylate amide or methacrylate amide (i.e., the H monomer component) and at least one acrylate ester or methacrylate ester (i.e., the L monomer component) (FF 2 and 4). The Examiner does not dispute that Yang fails to teach a copolymer comprising an acrylate amide or methacrylate amide component. The Examiner has not provided an evidentiary basis to support the conclusion

that a person of ordinary skill in this art would have found it prima facie obvious at the time Appellants' invention was made to replace Torgerson's adhesive polymer, for use in hair-care products, with Yang's adhesive copolymer, for use in decorative, light management or optical articles, to obtain a low glass transition temperature adhesive copolymer, which is one objective of Torgerson's invention (FF 1 and 6; *see also* Reply Br. 3-6).

CONCLUSION OF LAW

The Examiner erred in concluding that it would have been prima facie obvious to a person of ordinary skill in the art at the time Appellants' invention was made to modify Torgerson's composition by substituting Yang's adhesive copolymer comprising n-butyl acrylate/2-hydroxy ethyl (meth)acrylate/2-ethyl hexyl acrylate monomers for Torgerson's adhesive copolymer.

The rejection of claims 167, 168, 171, 172, 174, 175, 177, 178, 180, 181, 185-191, 193-203, 205-208, 210-216, 218-228, 230-240, 242-245, 247-253, 255-258, 260-266, 268-278, 280-290, 292-302, 304-307, and 309-311 under 35 U.S.C. § 103(a) as unpatentable over the combination of Torgerson and Yang is reversed.

Appeal 2009-010551
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REVERSED

alw

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